

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20732; Directorate Identifier 2004-NM-278-AD; Amendment 39-14617; AD 2006-11-13]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 777-200 and -300 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Boeing Model 777-200 and -300 series airplanes. This AD requires replacing the battery packs of the emergency power assist system (EPAS) of the left and right non-overwing exit doors with new or modified battery packs. This AD results from intermittent failures of the EPAS battery pack found during testing, which are due to switch contamination, cam alignment problems, and inadequate self-test capability. We are issuing this AD to prevent failure of the EPAS, which could result in the inability to open the exit door during an emergency evacuation.

DATES: This AD becomes effective June 30, 2006.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of June 30, 2006.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Nassif Building, Room PL-401, Washington, DC.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Georgios Roussos, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6482; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain Boeing Model 777-200 and -300 series airplanes. That NPRM was published in the Federal Register on March 31, 2005 (70 FR 16449). That NPRM proposed to require replacing the battery packs of the emergency power assist system (EPAS) of the left and right non-overwing exit doors with new or modified battery packs.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

Supportive Comment

Boeing concurs with the contents of the NPRM.

Request To Include Reporting Requirement/Return Defective Components

Radiant Power Corporation states that, after working with the airplane manufacturer, it identified and tested a replacement switch produced by a different manufacturer and incorporated the switch into a new design which was approved by the airplane manufacturer. Radiant Power Corporation adds that the existing suspect part number (S283W203-1) is the current airplane manufacturer's part number, and both part numbers BPAS10-1 and S283W203-1 are incorporated into each battery pack Radiant Power Corporation produces. Radiant Power Corporation has replaced 510 (approximately 50 percent) of the defective EPAS battery packs identified in the NPRM with these new, improved units; 795 of the new units have been delivered to its customers with no units returned after delivery due to failure of the new switch modification. Radiant Power Corporation adds that the latest upgrade of the battery pack meets all the necessary requirements of the battery pack that was modified by the airplane manufacturer. Radiant Power Corporation asks that information be added to the AD instructing operators to notify Radiant Power Corporation of the quantity of suspect battery packs found when accomplishing the NPRM on both Group 1 and 2 airplanes. Radiant Power Corporation states that when it receives that information it will then work out the replacement logistics of the suspect units within the timeframe specified in the AD.

We infer that Radiant Power Corporation wants to include a reporting requirement asking operators for the information specified; we do not agree. Under the Paperwork Reduction Act (PRA), we look for two reasons for including a reporting requirement in our ADs: (1) if there's a quality control problem and we need to know the extent of that problem; and (2) if we need more information to decide whether additional AD action is needed (i.e., the AD is interim action). In this case, neither of these reasons are applicable. The PRA requires agencies to consider the extent of the paperwork burden that will accompany any new rule. The PRA is intended to reduce these burdens

by requiring agencies not only to analyze the information collection and reporting costs they are imposing on the private sector, but to use those analyses to minimize the cost. Furthermore, we have determined that the design improvements, as implemented by Radiant Power Corporation, do not provide adequate test capability to detect potential latent failures of the battery pack circuit, and do not address the unsafe condition identified in this AD. Adequate test capability is required to ensure that the EPAS is able to support opening the airplane passenger doors during emergency evacuation conditions.

Radiant Power Corporation also asks that any existing defective EPAS battery packs be returned to them for warranty repair.

We do not have the authority to direct operators to return defective components to the parts manufacturer; we can only require repair or replacement of defective components that are installed on the airplane. In light of this, we have made no change to the AD in this regard.

Request To Replace Battery Packs on Attrition Basis Only

United Airlines states that they follow the Maintenance Review Board (MRB) process specified in the Boeing 777 MRB, Task 52-091-00, which provides procedures to restore the EPAS battery pack at its life limit of three years. United Airlines adds that performing the tasks in the MRB process successfully identifies and corrects the identified unsafe condition (switch contamination, cam alignment problems) found in these units. United Airlines notes that following the airplane manufacturer's replacement instructions adequately eliminates the possibility of experiencing latent failures once the battery pack is in service. United Airlines also states that, under the MRB actions, the battery packs are opened, inspected, restored, and functionally tested after rework using specialized procedures developed by the airplane manufacturer. United Airlines adds that, provided operators follow the refurbishment procedures specified by the airplane manufacturer, the proposed replacement of the battery packs with new units should be made on an attrition basis.

We do not agree. The MRB actions that United Airlines refers to are performed every three years and are not adequate to maintain the battery pack at the reliability level required to support opening the passenger entry door during emergency evacuation conditions. In addition, no supporting data was provided identifying the specialized procedures used for the rework and testing of the battery packs. However, if supporting data are provided, persons may apply for approval of an alternative method of compliance (AMOC) in accordance with the provisions in paragraph (j) of this AD. We have made no change to the AD in this regard.

Request To Address Defective Parts Manufacturer Approval (PMA) Parts

The Modification and Repair Parts Association (MARPA) asks that the NPRM be revised to cover possible defective PMA alternative parts; the NPRM provides for replacement of battery packs designated by certain part numbers with "new and improved" battery packs. MARPA states that the NPRM fails to address the possibility that parts approved under 14 CFR part 21.303(a)–(PMA)–may be installed in lieu of the parts mentioned in the airplane manufacturer's service bulletins. MARPA notes that there are at least two battery packs that may be installed in lieu of the airplane manufacturer's parts; those parts are manufactured by the battery manufacturer. MARPA adds that, the PMA parts apparently have the battery manufacturer's part number, rather than the airplane manufacturer's part numbers in the referenced service bulletins. MARPA states that specifying only the OEM part number creates a regulatory loophole, which could create safety issues by allowing defective parts to remain in service. Therefore, MARPA requests the following: (1) that the FAA determine whether the PMA parts contain the same defects as the airplane manufacturer's parts, and (2) that the NPRM be modified to address the possibility that PMA parts are installed in place of the OEM parts specified in the referenced service bulletins.

In its comment, Radiant Power Corporation agrees with MARPA that the PMA and OEM part numbers should be addressed by the NPRM. However, this situation does not apply to Radiant Power Corporation because their PMA parts include the OEM part number.

We partially agree with MARPA.

We agree that, if we know that an unsafe condition also exists in PMA parts, the AD should address those parts, as well as the original parts. MARPA identified a PMA part that, in this case, is identical to the OEM part. The part has received PMA under a licensing agreement from the OEM, and is identified by both the OEM and the part manufacturer's part number; therefore, the part is subject to the requirements of this AD. We also note that both of these part numbers are listed in the OEM's airplane maintenance documentation. We are not aware of any other parts that have received PMA approval.

MARPA's remarks are timely in that the Transport Airplane Directorate currently is in the process of reviewing this issue as it applies to transport category airplanes. We acknowledge that there may be other ways of addressing this issue to ensure that unsafe PMA parts are identified and addressed. Once we have thoroughly examined all aspects of this issue, including input from industry, and have made a final determination, we will consider whether our policy regarding addressing PMA parts in ADs needs to be revised. We consider that to delay this AD action would be inappropriate, since we have determined that an unsafe condition exists and that replacement of certain parts must be accomplished to ensure continued safety. Therefore, we have made no change to the AD in this regard.

Request To Consider Broader Aspects of an Identified Problem

MARPA also suggests that the FAA has largely ceded continuing airworthiness problem identification to the airplane manufacturer's. MARPA states that service difficulties are reported to the airplane manufacturer, who then determines the appropriate corrective action and issues a service bulletin; the FAA then takes a reactive role and issues an airworthiness directive (AD). MARPA adds that the majority of ADs are issued as a result of the service bulletins, which can create problems for operators. One of these problems is that airplane manufacturers operate in an insular niche where the prevailing view is that all their products are the same. MARPA provides an example of the service bulletins ignoring the existence of PMAs and that some affected products may be modified by installation of PMA parts. This results in service requirements that may require modification before being applied in the form of an AD. MARPA suggests that the FAA consider this when an AD involving a component part that may have a PMA alternative is issued.

Although MARPA's remarks do not specifically request a change to this AD, we would like to clarify that we do use service bulletins as starting points for our research into the development of an AD, when they are available, because of the OEM's expertise and broad knowledge of the product. Often, service information may not even be available that addresses a particular identified unsafe condition. In all cases, we may also consult with other aeronautical experts, specialists, and vendors, and we may research databases, reports, testing results, etc., to ensure that the unsafe condition is addressed in an appropriate and timely manner. We have made no change to the AD as a result of MARPA's remarks in the previous paragraph.

Request To Change Cost Estimate

American Airlines (AAL) has no objection to accomplishing the replacement required by the NPRM, but disagrees with the cost estimates. AAL states that it has accomplished the required replacement on 35 airplanes, and the labor required is 12 work hours (1.5 hours per door) per airplane. AAL adds that the parts cost is \$29,061 per airplane, for a total cost of \$1,300,200 to accomplish the replacement on those airplanes.

We do not agree with AAL's request. Our cost estimate is based on information that the manufacturer has provided to us. Also, we point out that the cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions. We have made no change to the AD in this regard.

Clarification of Alternative Method of Compliance (AMOC) Paragraph

We have revised this action to clarify the appropriate procedure for notifying the principal inspector before using any approved AMOC on any airplane to which the AMOC applies.

Conclusion

After careful review of the available data, including the comments noted above, we have determined that air safety and the public interest require the adoption of the rule with the change previously described. This change will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 348 airplanes of the affected design in the worldwide fleet. This AD affects about 134 airplanes of U.S. registry.

The replacement takes about 8 work hours per airplane (1 work hour per battery pack), at an average labor rate of \$65 per work hour. Required parts cost about \$29,058 per airplane. Based on these figures, the estimated cost of the replacement for U.S. operators is \$29,578 per airplane.

For Group 2 airplanes: The optional modification, if accomplished, takes about 16 work hours per airplane (2 work hours per battery pack), at an average labor rate of \$65 per work hour. Required parts cost about \$789 per airplane. Based on these figures, the estimated cost is \$1,829 per airplane.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;

(2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2006-11-13 Boeing: Amendment 39-14617. Docket No. FAA-2005-20732; Directorate Identifier 2004-NM-278-AD.

Effective Date

- (a) This AD becomes effective June 30, 2006.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Boeing Model 777-200 and -300 series airplanes, certificated in any category; as identified in Boeing Service Bulletin 777-52-0033, Revision 1, dated June 12, 2003.

Unsafe Condition

- (d) This AD was prompted by intermittent failures of the emergency power assist system (EPAS) battery pack found during testing, which are due to switch contamination, cam alignment problems, and inadequate self-test capability. We are issuing this AD to prevent failure of the EPAS, which could result in the inability to open the exit door during an emergency evacuation.

Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Replacement

- (f) For Group 1 airplanes, as identified in Boeing Service Bulletin 777-52-0033, Revision 1, dated June 12, 2003: Within 24 months after the effective date of this AD, replace the battery packs of the EPAS of the left and right non-overwing exit doors with new battery packs by doing all the actions specified in Boeing Service Bulletin 777-52-0033, Revision 1, dated June 12, 2003.

Replacement or Modification

(g) For Group 2 airplanes, as identified in Boeing Service Bulletin 777-52-0033, Revision 1, dated June 12, 2003: Within 24 months after the effective date of this AD, accomplish the actions specified in either paragraph (g)(1) or (g)(2) of this AD.

(1) Replace the battery packs as required by paragraph (f) of this AD.

(2) Modify the battery packs by doing all the actions specified in Boeing Component Service Bulletin 285W0955-24-01, dated November 21, 2002.

Credit for Actions Accomplished Previously

(h) Accomplishing the applicable actions required by paragraph (f) or (g) of this AD before the effective date of this AD, in accordance with Boeing Special Attention Service Bulletin 777-52-0033, dated November 21, 2002, is considered acceptable for compliance with the corresponding actions in this AD. Part number (P/N) S906-10207-2 (for a 9-volt alkaline battery), shown in Paragraph 2.C.2. of that service bulletin, is not a valid P/N; the correct P/N that must be used is P/N S906-10135-8011.

Parts Installation

(i) As of the effective date of this AD, no person may install a EPAS battery pack, P/N S283W203-1 or P/N 285W0955-101, on any airplane.

Alternative Methods of Compliance (AMOCs)

(j)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with 14 CFR 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

Material Incorporated by Reference

(k) You must use Boeing Service Bulletin 777-52-0033, Revision 1, dated June 12, 2003; and Boeing Component Service Bulletin 285W0955-24-01, dated November 21, 2002; as applicable; to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on May 16, 2006.

Kevin M. Mullin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 06-4845 Filed 5-25-06; 8:45 am]

BILLING CODE 4910-13-P